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ABSTRACT

This monograph represents 5 years of collaborative discussions among individuals interested in improving the teaching and learning of mathematics beginning in 1985 with the planning of a conference and culminating in the production of this collection of 13 papers to be presented at the conference. Chapters include: (1) an introduction "Constructivist Views on the Teaching and Learning of Mathematics"; (2) "Constructivism in Mathematics Education" (Nel Noddings); (3) "An Exposition of Constructivism: Why Some Like it Radical" (Ernst von Glasersfeld); (4) "Epistemology, Constructivism, and Discovery Learning Mathematics" (Gerald A. Goldin); (5) "Children's Learning: A Cognitive View" (Arthur J. Baroody & Herbert P. Ginsburg); (6) "The Nature of Mathematics: What Do We Do When We 'Do' Mathematics?" (Robert B. Davis & Carolyn A. Maher); (7) "Teacher's Learning: Building Representations of Children's Meanings" (Carolyn A. Maher & Robert B. David); (8) "Discovery Learning and Constructivism" (Robert B. Davis); (9) "What Constructivism Implies for Teaching," (Jere Confrey); (10) "Classrooms as Learning Environments for Teachers and Researchers" (Paul Cobb, Terry Wood, & Erma Yackel); (11) "Teacher Development in Mathematics in a Constructivist Framework" (Carolyn A. Maher & Alice Alston); (12) "On the Knowledge of Mathematics Teachers" (Leslie P. Steffe); and (13) a conclusion, "Suggestions for the Improvement of Mathematics Education" (Robert B. Davis, Carolyn A. Maher & Nel Noddings). (CW)

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